T. S. Lee, who, I am sure, will not object to my using so great liberty with his work, the more especially as it may assist in spreading further and wider the knowledge he has been at so great pains to collect, and make it both more public and useful at once." Then follows *my* table with this head, "*Table, by Dr. Lee,*" and the several succeeding pages, through which the table is continued, have, each one, this title: "*Dr. Lee's Table.*" As both Dr. Meigs' book and the *Amer. Med. Journ.* have a wide circulation among American practitioners, it will be perfectly competent for them to compare Dr. Lee's table of 1847 with my table of 1845, and decide *who* "*presented* the Tabular View," and *who* "has been at *so great pains to collect* the knowledge" therein contained.

ART. IV.—*Case of Malformation of the Cranium, Encephalon, and Spinal Cord.* By JNO. C. DALTON, Jr., M. D. (With eight wood-cuts.)

THIS fœtus was brought to me on the evening of October 13th, 1849, by Dr. Wm. H. Thayer, by whom the following particulars respecting the pregnancy, labour, &c., were also furnished.

The mother was a large, stout Irishwoman, æt. 21, living in Columbia street. She had always been well, and knew of no member of either her own or husband's family who had any malformation. She was married in the last week of November, 1848; was menstruating at the time, and menstruated once more, a month later. Her husband abandoned her three months before confinement; but she denied that she had lived unhappily with him, and either could not or would not give any reason for his leaving her. She seemed to have been comfortably provided for as regards lodging, &c.

She had experienced no unusual symptom during pregnancy, except that she was, by her own account, enormously large; "larger than she had ever seen any one." Her lower extremities were œdematous for the last three months of pregnancy. She could recollect nothing about the motions of the child—at what period they began, or whether there was anything peculiar in their character.

Labour commenced Oct. 13th, at noon. Dr. Thayer was called at 4½ P. M.

"At the first examination (4½), apparently head presentation; os uteri little dilated.

"Second examination (5 P. M.), presentation peculiar. Can feel the alveolar ridge of one jaw, but not the other. Eyes very prominent. Diagnosis: anencephalous fœtus.

"Third examination (5¼). Os uteri was fully dilated, and I therefore ruptured the membranes in order to make out more fully the presentation, and to make any change of position that might be necessary. (The face was toward the pubis.) Very little water (℥j to ℥iij) was discharged. At one side of the head, toward the sacrum, was a soft mass, projecting partly over the head, and half covering the uterine orifice, which I should have taken to be placenta, were it not perfectly smooth, as if enclosed in a membranous bag.

"Ten minutes past seven. Bag against perineum for last hour. Pains very frequent and no progress. Passed my hand beyond what appeared to be the jaw, and felt apparently a bag of water, which I ruptured, and *discharged an immense quantity at a single gush.* The pains continued very

> frequent and severe, but without effect. The bag, or tumour, was so soft that it could not distend the vulva, and the remainder of the child seemed to fill completely the upper strait; so that, with all the traction with my hand that I could safely use, I could not advance it. Forceps could not be applied with profit, as the form was so irregular and the presenting part so soft. I therefore—
>
> "At ten minutes past eight, gave nearly ʒj of ergot. At this time, the tumour had passed the vulva, and I felt two more behind it. The pains soon increased in force, and at forty minutes past eight the fœtus was born.
>
> "It made no movement after birth, but was perfectly fresh, and had evidently been living up to that time.
>
> "The uterus contracted properly. Subsequently, the woman did perfectly well. She had a large secretion of milk."

The fœtus was a female, large, stout, and fat. It weighed seven and a quarter pounds, and measured one foot seven and one-eighth inches in length. The skin was covered with a thin coating of sebaceous matter. The nails were well developed, reaching quite to the ends of the fingers; or, in some instances, a little beyond them. The umbilicus was situated midway between the sternum and pubis. Middle point of body a little below the umbilicus. The hair about the head was in some parts one and three-eighths inches long.

The fœtus was attached to the placenta by a short cord, only seven and a half inches in length, very slightly twisted from right to left, and containing only the umbilical vein and one umbilical artery. The placenta itself was large, but not very thick. It weighed, with the membranes and cord, one pound.

Next morning, at eleven o'clock, cadaveric rigidity was everywhere fully established.

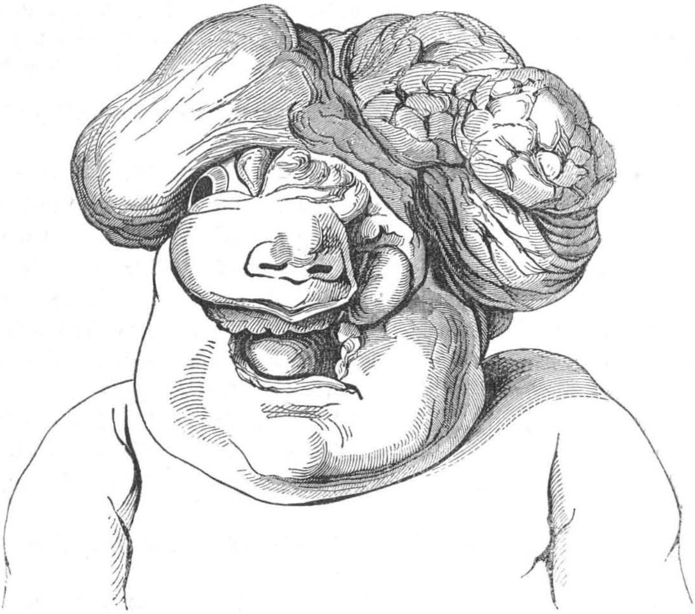
Every part of the fœtus externally was perfect, excepting the face and cranium. The upper jaw was fissured upon the left side, and the fissure extended quite through the cheek, so that the cavity of the mouth, at this part, was open externally. The fissure also extended backward through the hard and soft palate, exposing the cavity of the left nostril; but, what was sufficiently remarkable, though continuous from before backward, it crossed the median line, from left to right, so that the uvula hung from the velum pendulum palati on the left side of the fissure. This was apparently connected with the lateral twisting of the facial bones, as will be explained hereafter.

The left cheek had also a fissure, extending from the angle of the mouth, outward and downward, the edges being lined with everted mucous membrane, or a kind of prolabia. This, however, may have been only the angle of the mouth, twisted somewhat out of its natural position.

The right eye was in its normal situation with respect to the other features, and about the natural size. It had a very imperfect upper and lower lid; and the eyeball, which was prominent and staring, was directed upward and outward, giving to the countenance a most remarkable and sinister expression.

The left eye was placed considerably below its proper situation, and the eyeball was much exposed, being furnished with only a rudimentary upper and no lower lid. The globe of this eye, considerably less developed than that of the right, was strongly inverted, so as partially to conceal, in a front view, the imperfectly formed cornea and pupil, which were directed upward and inward.

Fig. 1.



The cranial bones were deficient from just above the level of the right eye round to the superior edge of the occipital bone, which was inclined forward in such a manner as greatly to contract that part of the cranial cavity which still remained. Above the level of the eye, the head was surmounted by three large lobes of cerebral substance, which overhung the forehead and temples like a turban, as represented in the drawing, Fig. 1. The right of these lobes, for reasons which will be detailed hereafter, was considered as representing the right hemisphere of the brain, or rather the middle and posterior lobes of that hemisphere. It was covered with a thin, bluish, nearly opaque integument, which was generally smooth, but was thrown into parallel wrinkles where the lobe overhung the eye and temple. No appearance of convolutions was visible here. The middle lobe, however, which answered to the anterior lobe of the left hemisphere, was covered with a much thinner, transparent, and more serous-like membrane, through which the subjacent convolutions of the cerebral surface were apparent. The third, or left lobe, representing the middle and posterior lobes of the left hemisphere, was again covered with a thicker, bluish, nearly opaque membrane, which was thrown into parallel folds by the bagging down of the tumour. This membrane was continuous, at the edges of the base of the skull, with the common integument, which it also approached in character, though a sufficiently distinct line of cicatrization was still visible at the junction of the two.

There was no hair on any part of the integument covering the brain, but there was a narrow line running across the forehead in an oblique direction, downward and to the left, along which was a growth of dark hair, some of it one and a quarter inch in length. The skin on the posterior part of the head, covering the occipital bone, was also furnished with a sufficiently abundant growth of similar hair.

Perhaps the most remarkable appearance about the exterior of the fœtus was what, in all probability, is to be considered as a double cavity of the amnion. The membranes being ruptured at the time the fœtus was examined, these two cavities could not, of course, be demonstrated; but the appearances were such as did not permit us to doubt that they had existed. The comparatively thick, friable, and semi-opaque chorion came off in a natural manner from the edges of the placenta, and the thin, smooth, and perfectly transparent amnion had also its usual attachment round the insertion of the cord. But, besides these, there was a third membrane, absolutely similar to the amnion in appearance, and doubtless identical with it, which was attached about the head of the fœtus. The line of attachment extended from the lower and outer part of the left eye at the reflexion of the conjunctiva, up the forehead, back over the brain, along the line of division between the (supposed) hemispheres, and round along the edge of the skin, forward to the external angle of the right eye. From this point, the membrane passed across the cavity of the mouth to reach again the lower part of the left eye, forming a horizontal sheet between the upper and lower jaws, the posterior free edge of which had a crescentic shape, with its concavity looking towards the pharynx, and could be felt by the finger, introduced from above, as a falciform stricture. Behind this falciform edge, the two cavities of the amnion had apparently communicated with each other.

The membrane was double along this line of attachment, and its two layers adhered to each other, back to back, for a breadth varying from a quarter of an inch to an inch and a quarter. They then separated; one of them having probably enveloped the body and limbs, the other those parts included in the circular attachment.

The coverings of the brain, as already remarked, partly resembled skin in their appearance, and partly serous membrane. They consisted, as near as could be determined, of the superior layer of the arachnoid, invested externally with more or less cuticle, which was continuous with that of the surrounding skin. There was no dura mater, with the exception of a little fibrous tissue spreading from the edges of the base of the skull, mostly in front, from directly over the orbits. On raising the external covering of the brain, in some few spots a smooth arachnoid cavity was discovered; but, as a general rule, this cavity was represented by the meshes of a loose cellular tissue, which permitted the integuments to be easily dissected from the cerebral surface. This surface was invested by pia mater. It presented perfect external convolutions only in one part, viz., that which formed the middle lobe of the tumour as it rested on the child's head, and which appeared to be the left anterior lobe of the brain; forming, together with the left lobe of the tumour, the left hemisphere: while the right hemisphere was represented by the single, unconvoluted tumour to the right of the median line, the anterior lobe of this hemisphere being very imperfectly developed.

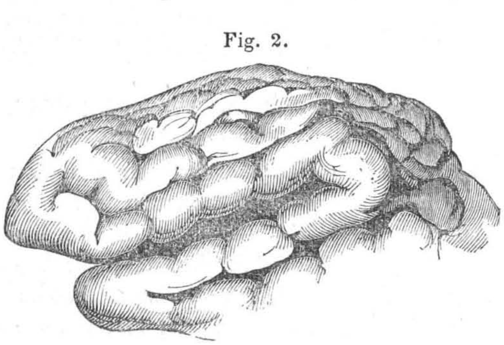
That the right and left hemispheres were in reality represented by these lobes, as I have indicated them, appeared probable for the following reasons:—

I. The fissure or division between them was nearly in the median line, running in a tolerably straight direction from front to rear. (It was along this line that the amnion had its secondary attachment, as already described.)

II. On separating the lobes along this line, by tearing through a soft, reddish, and somewhat granulous cellular tissue, a cavity was opened which had considerable resemblance to a third ventricle, as it was deep and narrow, with smooth walls, and showed upon its floor the commencement of an infundibuliform process, corresponding in situation and direction to the infundibulum of the pituitary gland. A well-marked pituitary gland was, in reality, situated immediately beneath, as will be seen hereafter. There was an imperfect fornix, represented by a thin, vertical plate of cerebral substance, running from before backward, fused above with the cerebral mass of the left side, and terminating below in a thin, free edge of a crescentic shape. No anterior or middle commissure was to be distinguished; and the great transverse commissure, or corpus callosum, as will be inferred from the description already given, was nearly or quite deficient. Towards the posterior part of the cavity, there was a white transverse band, which resembled somewhat a posterior commissure; and behind it some slight protuberances, which presented a similar resemblance to the tubercula quadrigemina: but neither commissure nor tubercles were sufficiently well developed to permit us to pronounce with certainty upon their character.

On examining the cerebral mass, which lay to the left of the longitudinal fissure, it was evidently divided into two lobes by a sufficiently well-marked fissure of Sylvius, which contained a good sized vascular trunk, and branches running in the usual direction. At the bottom of the fissure was an easily recognizable Island of Reil, and its edges were formed by

Fig. 2.



convolutions folded from above downward, and from behind forward, as in the natural formation.

The whole of the brain below and to the outside of this fissure, therefore, represented the middle and posterior lobes of the hemisphere. It was, as already mentioned, almost destitute of convolutions externally, and consisted of a dark, reddish-gray, granular substance, very vascular and soft. It was thickly sprinkled with minute gray granulations, which showed very distinctly against the dark, reddish ground beneath. Its interior was occupied by a large empty cavity, which was, indeed, so extensive, that the whole lobe composed a sac, the walls of which superiorly were not more than a quarter of an inch in thickness. The inner surface of the sac was very irregular, nodules and pedunculated lobules of cerebral substance projecting into its cavity. The cavity extended forward into the middle, well-developed, convoluted lobe (anterior lobe of left hemisphere), forming the anterior corner of the lateral ventricle, and posteriorly communicated by a large opening with the median cavity, or third ventricle.

No structure resembling that of the striated bodies, or optic thalami, could be discovered in the situation of these parts, though it was sought for with some care.

The mass to the right of the median fissure resembled that corresponding to the middle and posterior lobes of the left side: *i. e.*, it consisted of a dark, reddish, friable substance, enclosing a large cavity. It had, however, been ruptured in delivery, and its cavity torn open; and the contusions of its substance and consequent ecchymosis were so considerable, that its structure and relations could be less perfectly made out than those of the corresponding portion on the opposite side. For the same reason, it was uncertain whether any effusion of serum had existed in these cavities previous to birth. There was a very little white lobulated substance towards its anterior part, but this was deeply situated, and not visible externally.

That portion of the cranial cavity which was covered in by the occipital bone contained a medulla oblongata and cerebellum. The latter was very small and imperfect, destitute of convolutions, and consisted of dark, reddish-gray substance, similar to that already described, enclosing a large fourth ventricle which communicated by a wide passage with the cavities in front. The floor of this fourth ventricle showed a well-marked calamus scriptorius, and two distinct restiform bodies diverging from it in an upward direction. Its surface was thickly sprinkled with minute gray granulations, of firm consistency and an opaline aspect, similar to those already noticed as occurring in other parts of the brain. There were also a few, rather larger in size and of a yellowish colour, attached to the sides of the ventricle.

Anteriorly, the medulla oblongata was coated with a thin layer of opaline substance, which was sufficient to obscure its natural prominences. The central ganglia of the anterior pyramids, however, were distinct and well developed; but the convoluted ganglia of the olivary bodies, though carefully sought for, were not to be discovered.

Olfactory Nerves.—There were two masses which occupied the natural situation of the olfactory lobes on the base of the skull, but they were so intermixed with fibrous tissue that it was impossible to pronounce them such with certainty.

Optic Nerves.—The optic nerves appeared in their natural position upon the sella turcica as very red, softish bundles, having more the appearance of slender muscles than of nerves. After penetrating the optic foramina, however, they assumed their usual white colour and nervous aspect, but became much reduced in size.

Immediately behind the commissure of the optic nerves was a well-developed, globular, pituitary body, in its natural situation with regard to the cranial bones.

The third pair took their natural origin from the base of the brain, and running forward penetrated the dura mater, as usual, at the side of the sella turcica.

Fourth pair not distinguishable.

The fifth pair had their natural point of origin. They crossed the ridge of the petrous portion of the temporal bone at its anterior extremity, as a dark-red flattened band of nervous matter, and at the usual distance after entering their fibrous canal became merged in a perfectly distinct and well-developed Casserian ganglion, the light colour of which contrasted well with the dark red of the nerve to its interior. After emerging from the ganglion, the nerve divided into its three branches, of natural appearance, which quitted the skull by their appropriate foramina. The infra-orbitary and inferior dental branches emerged upon the face at their usual situations; but the supra-orbitar, of course, did not appear externally, owing to the deficiency of the superior part of the cranium. The ophthalmic division, indeed, was not traced beyond the point at which it left the skull.

On cutting away a very imperfect tentorium and turning the base of the brain farther back, the sixth pair (abducentes) could be seen penetrating the dura mater at the anterior part of the pars petrosa. The facial and auditory entering the internal auditory meatus; posteriorly, the glosso-pharyngeal and pneumogastric, with the spinal accessory coming up from below to join them, and emerging at the posterior foramen lacerum; and, still farther down, the lingual, going out at the anterior condyloid foramen, were all distinctly visible. All these nerves had, as near as could be ascertained, their normal attachments to the cerebral substance.

It will be noticed that nearly all the cranial nerves presented their natural appearance except the optic and trifacial, which were very red and vascular in the first part of their course, but afterward resumed their ordinary colour.

The globe of the right eye was well developed and perfect in all its parts, but the optic nerve was unnaturally slender as far back as its point of emergence from the optic canal. The roof of the orbit being deficient at this part, the nerve was readily exposed throughout its course, except just where it passed underneath the lesser wing of the sphenoid bone. The course and appearance of the left optic nerve were similar to those of the right, but the globe of the left eye, as well as its appendages, was much less perfect. The cornea was small and irregular in shape, and the opening of the pupil could not be distinguished externally in consequence of the cavity of the sclerotic being filled with a thin, reddish-brown fluid, which obscured the parts. (On examination, however, the iris and pupil were found to be perfect in shape, though small.) Adhering to the posterior wall of the sclerotic cavity, and projecting from it, was a large fibrous friable coagulum, which presented the yellow colour of old extravasated blood. There were also some small, dark-red coagula. The extravasation seemed to have taken place beneath the retina, and to have ruptured this membrane from without inward. The crystalline lens of this eye was nearly globular in shape, while that of the right eye had its natural form of a double convex lens, with the greater convexity looking backward.

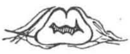
The ears were perfect externally, and the bones of the middle ear completely developed.

The tongue was natural in size and shape, and covered with all its proper papillæ and follicles. The epiglottis, larynx, and neighbouring parts were also perfect.

The teeth were well developed.

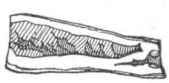
The spinal canal was perfect. The spinal cord had, for the most part, its natural size and external appearance. It was, however, smeared, particularly on its posterior aspect, with a thin layer of opaline, fibrinous-looking substance, similar to that on the medulla oblongata. The spinal nerves came off, as usual, by anterior and posterior roots. The cord itself contained a cavity or ventricle, which at the upper part of the cervical portion was moderate in size, and oblong from side to side (Fig. 3), and sufficiently regular. Immediately below this part, was a transverse partition, which separated the upper portion of the canal from that below (Fig. 4). Beyond this, the canal was divided into two lateral cavities by a central longitudinal partition, which afterward became variously subdivided and multiplied, so that a transverse section of the cord at the middle of its cervical portion showed three distinct cavities or ventricles (Fig. 5). Still farther down, the septum became imperfect, and showed various perforations, through which the lateral cavities communicated with each other. At one point (as in Fig. 6), there was a large gap, or fenestra, with a rounded cord of nervous matter running across it. Similar roundish cords ran

Fig. 3.



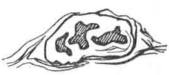
Transverse section across upper part of cervical portion.

Fig. 4.



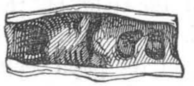
Longitudinal section of upper part of cervical portion.

Fig. 5.



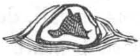
Transverse section across middle of cervical enlargement.

Fig. 6.



Longitudinal section of lower part of cervical portion.

Fig. 7.



Transverse section of dorsal portion.

across the cavities at various points, mostly in a transverse direction, and the walls generally presented numerous irregularities and projecting nodules of nervous matter, which were also noticed as occurring in the ventricles of the brain.

Below the cervical portion, the longitudinal septum was again wanting, so that a transverse section in the dorsal region (Fig. 7) showed a single cavity, which was here distended by a red, pasty substance like old blood, or like bloody serum, coagulated by the alcohol in which the cord had been hardened. Except for the above peculiarities, the spinal cord had its natural appearance.

The thoracic and abdominal organs were all natural, with the following exceptions:—

1. The supra-renal capsules were very small and imperfect—hardly a tenth part the size of the kidneys, instead of being one-third their size, as is usual at the termination of fœtal life. The kidneys themselves were large and thick, and still retained, to a considerable extent, their convoluted form.

2. There was but one umbilical artery, the right, which, however, was of sufficient size to answer the purpose of both. The left internal iliac gave off a fine arterial branch to the side of the bladder, but it was not prolonged at all towards the umbilicus. The calibre of the right common iliac, in consequence of its giving off the only umbilical artery, was something over five times (5.44) that of the left common iliac.

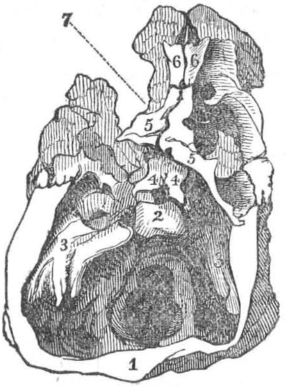
3. The left ovarium contained an ordinary serous cyst, one-fourth of an inch in diameter, filled with transparent fluid, and lined by a delicate vascular membrane.

The blood of the fœtus was examined by the microscope a few hours after birth. Its globules had, in every respect, their natural appearance.

On examining the bones of the head, after they had been macerated and dried, the fissure of the upper jaw was found to be situated between the maxillary and inter-maxillary bones of the left side; that portion of the jaw which remained attached to the median line containing only the upper incisors, and, of course, corresponding to the inter-maxillary bone. The fissure ran from before backward, exposing the cavity of the left nostril through its whole extent. Posteriorly, the fissure had an inclination to the right side, and here the cavity of the right nostril was also exposed. There was but little deficiency of substance anywhere, and the bones composing the superior maxilla appeared rather to have been wrenched apart by violence, while yet imperfectly ossified, thus leaving a gap between them. The appearances about the upper part of the head tended to confirm this supposition. The orbital arch, complete on the right side, was deficient on the left, and the left frontal bone

Fig. 8.

View of the cranium from above.



1. Occipital bone. 2. Posterior sphenoid. 3, 3. Petrous portions of the temporal. 4, 4. Wings of the anterior sphenoid. 5, 5. Frontal bones, right and left. 6, 6. Nasal bones. 7. Fissure in left maxilla.

here terminated in a sharp spine, directed outward, leaving a gap some five-sixteenths of an inch in width between its extremity and the external portion of the orbit. On viewing the cranium from above, there was evident a very strongly marked lateral twisting of the bones (Fig. 8), precisely as if they had been crushed and forcibly displaced, at some earlier period, by a blow upon the left side. The globe of the left eye, also, forced from its natural position, partially disorganized, and containing a considerable amount of extravasated blood, added somewhat to the plausibility of this idea. On the whole, though it could not be ascertained that the woman had suffered any ill treatment during her pregnancy, yet the appearance of the bones was such as to tend strongly to the conclusion that the malformation, in this instance, was due to external violence; and that a blow had been inflicted, in the early stages of fœtal life, which had forced apart the yet unconsolidated maxillary and inter-maxillary bones, driven the left eyeball down into the fissure, and arrested the ossification of the bones composing the vault of the cranium.

A somewhat similar case to the foregoing occurred in Boston, in 1834, in the practice of Dr. C. T. Hildreth, who published an account of the malformation under the name of *notencephale.* In that instance, the brain was situated in the dorsal region, the spinal canal was open posteriorly, and the spinal cord deficient. The two cases resemble each other in the presence of an unusual quantity of liquor amnii, and the existence of only one umbilical artery. According to the somewhat clumsy nomenclature of Geoffrey St. Hilaire, Dr. Hildreth's case would more properly be designated as *exencephale,* and the present instance would come under the head either of *hyperencephale* (brain exterior and superior to the cranial cavity), or *pseudencephale* (brain imperfect or degenerated in texture).

With regard to the cause of these and similar malformations, Geoffrey St. Hilaire (*Anomalies de l' Organization*) is of opinion that they are frequently to be attributed to violence in the early stages of pregnancy. He states that "nearly always the mother has been subjected, during the first months of gestation, to some serious accident, some sudden fright, illness, fall, or stroke upon the abdomen." Vol. ii. p. 345. He attributes the great frequency of monstrous births among unmarried females to the anxiety and ill-usage to which they are exposed, and the rude attempts at producing abortion to which they subject themselves.

He refers also to a case of hyperencephale, in which there was an unnatural adhesion between the membranes and fœtus, as in the present instance. "The malformation of the head was the more remarkable in this subject for being connected with a very anomalous disposition of the placenta, which adhered to the denuded portion of the brain by a membranous band about an inch wide, and an inch and a half long." Vol. ii. p. 306.

According to the same author, cases of hyperencephale are not unfrequently accompanied by malformations of the face, the most frequent of which is the double hare-lip, with fissure of the palatine arch.

ART. V.—*Cases of Labour.* (Read to the "Boston Society for Observation in Medicine and the Collateral Sciences.") By CHARLES E. BUCKINGHAM, M. D., Physician to the House of Industry. (With five wood-cuts.)

CASE I.—*Labour Complicated with Bright's Disease.*—Mrs. K., twelfth pregnancy, has borne four living, and three still children, and has had four miscarriages and abortions, at different periods. Was called to her on the 14th of June, 1844, at 10 A. M. Sitting up; countenance bloated and waxen; pains constant, low down in front, but not energetic. Placed her on the bed; head of fœtus presenting, but so high that the exact position cannot be detected; os uteri size of a twenty-five cent piece, soft, thick, and yielding; slight bloody show; has been in pain since 9 A. M.; skin cool and moist; pulse 70; at 11½ had a dejection, and was in bed before 12. Her labour progressed rapidly, and a dead female child, back to the pubes, was born in a few minutes. No hemorrhage from the cut extremity of the cord, the blood in it being coagulated. The placenta, with masses of clotted blood, followed of itself. There being no exhaustion, her clothing was changed, and she was got to bed by 12½ P. M. Pulse 70; skin cool and moist; was inclined to sleep, before which she took a sup of gruel.—5 P. M. Has passed urine once; restless; has taken spirits and water once, which caused vomiting, and was forbidden. After-pains severe, bringing blood with them; uterus contracted; regurgitation of wind; pulse 70, full and soft; general diaphoresis. ℞.—Syr. papaverum ʒij; mucilag. acaciæ ℥ij; liquor morphiæ sulph. gtt. xij. M. Take one-half, and repeat in an hour and a half.

15*th*. The mixture was rejected by the stomach. After-pains severe, with much blood; had some rest towards morning; uterus well contracted; abdomen tympanitic, but not tender. Got a dose of oil.

16*th*, 9 A. M. Pulse 100; tongue coated, white; great thirst; no headache; difficult micturition; bladder not distended; abdomen as yesterday. Oil was rejected. Less restlessness. Repeat oil. ℞.—Liq. ammoniæ acetat. ʒij every two hours.

17*th*, 9 A. M. No headache; tongue less coated; little appetite; slept well; had four dejections; urine free; less tympany; drank lemonade, which was followed by pain; pulse 100; no distension of breasts.

18*th*, 7 A. M. No urine; bladder empty; pulse 100; tongue slightly coated; abdomen full, soft, and tender; tenderness is relieved by pressure; pressure over bladder produces pain and desire to urinate; soreness of hips and across loins. Eight leeches to hypogastric region, by advice of a medi-